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10/657,561	09/09/2003	John Liccione	53086-00704USPT	3308

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EXAMINER

ASSESSOR, BRIAN J

ART UNIT PAPER NUMBER

2114

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/657,561	<b>Applicant(s)</b> LICCIONE ET AL.	
	<b>Examiner</b> Brian J. Assessor	<b>Art Unit</b> 2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-25 is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-16, 18 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 11, 17 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/26/2006</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being anticipated by Cramer (6,920,579) in view of Wang (6,587,970).

As per claim 1, Cramer teaches:

An application monitoring and disaster recovery management system,  
comprising:

a graphical user interface, in communications with said monitoring and management server module, (Cramer column 5, lines 25-28) capable of allowing a user to perform a failure switch-over from said primary computing environment to said secondary computing environment for said application in a single action; (Cramer column 5, lines 15-19)

whereby said system allows for disaster recovery and fault tolerance, and limits computing down-time experienced by end-users of said primary computing environment.(Cramer column 2, lines 59-64; column 4, lines 24-26)

Cramer does not explicitly disclose a primary computing environment, a secondary computing environment and a management server, executing a

Art Unit: 2114

monitoring and management server module, that is in communications with said primary server and said secondary server.

In Wang figure 1, elements 110, 120, and 160, Wang clearly discloses using a management server to monitor a first and second server health conditions, and to issue a failover sequence between the two if a server fails. It would have been obvious to a person of ordinary skill in the art at the time of invention to include the server health monitoring system as taught Wang in order to create a better failover method. This would have been obvious because Wang teaches that the above method is better suited for a less expensive and more reliable monitoring system. (Wang column 1, line 65 – column 2, line 16.)

As per claim 2, Cramer teaches:

The system of claim 1, further comprising: a first plurality of intelligent agents distributed within said primary computing environment, wherein each of said first plurality of intelligent agents monitors a metric related to said application executing on said primary server. (Cramer column 5, lines 29-32; the monitor for the server checks a number of software and hardware elements for failure.)

As per claim 10, Cramer teaches:

The system of claim 1, wherein said graphical user interface is further capable of allowing a user to perform a switch-back from said secondary computing environment to

Art Unit: 2114

said primary computing environment for said application in a single action. (Cramer figure 4, element 402; the user has one step for initiating the switch-back operation)

As per claim 12, Cramer teaches:

The system of claim 1, wherein said primary computing environment and said secondary computing environment are geographically dispersed. (Cramer column 4, lines 51-58; remote access could be from any amount of geographic locations.)

As per claim 13, Cramer teaches:

The system of claim 1, wherein said primary and secondary computing environments, said management server and said graphical user interface are interconnected over at least a portion of the global, public Internet. (Cramer column 4, lines 51-58; remote access over a network is at least a portion of the public Internet.)

Claims 3, 4, 14-16, 18, 20, ~~23~~, and ~~24~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer (6,920,579) in view of Wang (6,587,970) in further view of Cowan (6,115,743).

As per claim 3:

The system of claim 2, wherein each of said first plurality of intelligent agents are in communications with said monitoring and management server module, (Cramer

Art Unit: 2114

column 5, lines 29-32; the monitor for the server checks a number of software and hardware elements for failure.)

Cramer and Wang fail to explicitly disclose that the graphical user interface is capable of displaying the metric corresponding to each of said first plurality of intelligent agents.

In column 2, lines 59-65; Cowan clearly discloses a system wherein the GUI displays information from the monitoring and control of the servers on the network. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Cramer to include the capability of the GUI to display the server information as taught by Cowan, in order to keep the user better informed of the status of the servers. It would have been obvious because both Cowan and Cramer use GUI for server monitoring, Cramer just does not specifically mention displaying the status information that is retrieved. Cowan also teaches that the above process is better suited for management and monitoring of network devices. (Cowan column 1, line 66 – column 2, line 10)

As per claim 4:

The system of claim 3, further comprising: a second plurality of intelligent agents distributed within said secondary computing environment, wherein:

each of said second plurality of intelligent agents monitors a metric related to a subsystem within said secondary computing environment; (Cramer column 5, lines 29-

Art Unit: 2114

32; the monitor for the server checks a number of software and hardware elements for failure.)

each of said second plurality of intelligent agents are in communications with said monitoring and management server module; (Cramer column 5, lines 29-32; the monitor for the server checks a number of software and hardware elements for failure.) said graphical user interface is capable of displaying the metric corresponding to each of said second plurality of intelligent agents. (Cowan column 2, lines 59-65)

As per claim 14:

A method for providing a user with an application monitoring and disaster recovery management tool, comprising the steps of:

deploying a first plurality of intelligent agents within a primary computing environment, said primary computing environment including a primary server executing an application, (Cramer column 4, lines 41-44) and wherein each of said first plurality of intelligent agents monitors a metric related to said application; (Cramer column 5, lines 29-32; the monitor for the server checks a number of software and hardware elements for failure.)

a plurality of states, each of said plurality of states being rendered by one of said first plurality of intelligent agents; (Cramer column 5, lines 29-32; the monitor for the server checks a number of software and hardware elements for failure.)

performing a failure switch-over from said primary computing environment to a secondary computing environment having a secondary server capable of executing said

Art Unit: 2114

application (Cramer column 4, lines 24-26) in response to a first input received from the user via said graphical interface; (Cramer column 5, lines 15-19)

whereby said method allows for disaster recovery and fault tolerance, and limits computing down-time experienced by end users of said primary computing environment. (Cramer column 2, lines 59-64; column 4, lines 24-26)

In Wang figure 1, elements 110, 120, and 160, Wang clearly discloses using a management server to monitor a first and second server health conditions, and to issue a failover sequence between the two if a server fails. It would have been obvious to a person of ordinary skill in the art at the time of invention to include the server health monitoring system as taught Wang in order to create a better failover method. This would have been obvious because Wang teaches that the above method is better suited for a less expensive and more reliable monitoring system. (Wang column 1, line 65 – column 2, line 16.)

wherein the management server is in communication with the primary computing environment and a secondary computing environment; (Wang figure 1, element 160)

Cramer and Wang fail to explicitly disclose that the graphical user interface is capable of displaying the metric corresponding to each of said first plurality of intelligent agents.

In column 2, lines 59-65; Cowan clearly discloses a system wherein the GUI displays information from the monitoring and control of the servers on the network. It would have been obvious to a person of ordinary skill in the art at the time of invention



Art Unit: 2114

to modify Cramer to include the capability of the GUI to display the server information as taught by Cowan, in order to keep the user better informed of the status of the servers. This would have been obvious because both Cowan and Cramer use GUI for server monitoring, Cramer just does not specifically mention displaying the status information that is retrieved. Cowan also teaches that the above process is better suited for management and monitoring of network devices. (Cowan column 1, line 66 – column 2, line 10)

As per claim 15:

The method of claim 14, wherein said application is an electronic mail application, (Cowan column 8, lines 15-19) and said failure switch-over comprises the step of temporarily changing the hostname of said secondary server to the hostname of said primary server. (Cramer column 5, lines 38-45)

As per claim 16:

The method of claim 14, wherein said primary computing environment and said secondary computing environment are geographically dispersed. (Cramer column 4, lines 51-58; remote access could be from any amount of geographic locations.)

As per claim 18:

The method of claim 14, further comprising the step of:

Art Unit: 2114

performing a switch-back from said secondary computing environment to said primary computing environment (Cramer column 4, lines 47-50) in response to a second input received from the user via said graphical interface. (Cramer column 5, lines 25-28)

As per claim 20:

The method of claim 14, further comprising the steps of:

deploying a second plurality of intelligent agents within said secondary computing environment, wherein each of said second plurality of intelligent agents monitors a metric related to a subsystem within said secondary computing environment; (Cramer column 5, lines 29-32)

monitoring, by said monitoring and management server module, a second plurality of states, each of said second plurality of states being rendered by one of said second plurality of intelligent agents; (Cramer column 5, lines 29-32; numerous software and hardware states are monitored by the failover monitors.)

displaying to the user, via said graphical user interface, said second plurality of states. (Cowan column 2, lines 59-65)

Claims 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer (6,920,579) in view of Wang (5,587,970) in further view of Zetts (6,378,129).

As per claim 5:

Art Unit: 2114

The system of claim 1, further comprising:

a primary data repository located within said primary computing environment and accessible by said primary server; (Cramer figure 1, element 160; Disk Shelf A)

a secondary data repository located within said secondary computing environment and accessible by said secondary server; (Cramer figure 1, element 160; Disk Shelf B)

Cramer and Wang fail to explicitly disclose a system with means for synchronizing data stored in said primary data repository and said secondary data repository in real time as new data are written to said primary data repository as said application executes.

In column 3, lines 15-26; Zetts clearly discloses a system which two servers are synchronized and are configured as a primary server and a stand-by secondary server, which takes over in the event of a failure to the primary server. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Cramer to include a synchronous connection when having a stand-in backup server as taught by Zetts in order to increase data reliability. This would have been obvious because Zetts teaches that the above process is better suited for maintaining data reliability and accuracy in a server environment. (Zetts column 3, lines 4-9)

As per claim 6:

Art Unit: 2114

The system of claim 5, wherein said means for synchronizing data comprises a communications link from said primary server to said secondary server. (Cramer column 5, lines 15-22)

As per claim 8:

The system of claim 5, further comprising:  
a plurality of intelligent agents distributed within said primary computing environment, wherein each of said plurality of intelligent agents monitors a metric related to said primary data repository. (Cramer column 5, lines 29-32)

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer (6,920,579) in view of Wang (6,587,970) in view of Zetts (6,378,129) in further view of Midgely (6,115,743).

As per claim 7:

Cramer, Wang, and Zetts do not explicitly disclose a plurality of archival data stores, each accessible by said secondary data repository, wherein each of said plurality of archival data stores is capable of storing a different point-in-time level snapshot of data stored in said secondary data repository.

In column 1, lines 59-67; Midgely clearly discloses a system that records snapshots in order to back up data. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Cramer and Zetts to include the snap shot

Art Unit: 2114

copy system as taught by Midgely in order to increase data availability and recoverability. This would be obvious because Midgely teaches that the above system is better suited for backing up data. (Midgely column 2, lines 11-18)

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer (6,920,579) in view of Wang (6,587,970) in view of Zetts (6,378,129) in further view of Cowan (6,115,743).

As per claim 9:

The system of claim 8, wherein each of said plurality of intelligent agents are in communications with said monitoring and management server module; (Cramer column 5, lines 29-32)

Cramer and Wang fail to explicitly disclose that the graphical user interface is capable of displaying the metric corresponding to each of said plurality of intelligent agents.

In column 2, lines 59-65; Cowan clearly discloses a system wherein the GUI displays information from the monitoring and control of the servers on the network. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Cramer to include the capability of the GUI to display the server information as taught by Cowan, in order to keep the user better informed of the status of the servers. This would have been obvious because both Cowan and Cramer use GUI for server monitoring, Cramer just does not specifically mention displaying the status information

Art Unit: 2114

that is retrieved. Cowan also teaches that the above process is better suited for management and monitoring of network devices. (Cowan column 1, line 66 – column 2, line 10)

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer (6,920,579) in view of Wang (6,587,970) in view of Cowan (6,115,743) in further view of Zetts (6,378,129).

As per claim 21:

Cramer, Wang, and Cowan do not explicitly disclose a system which synchronizes data stored in a primary data repository accessible to said primary server within said primary computing environment and a secondary data repository accessible to said secondary server within said secondary computing environment in real time as new data are written to said primary data repository as said application executes.

In column 3, lines 15-26; Zetts clearly discloses a system which two servers are synchronized and are configured as a primary server and a stand-by secondary server, which takes over in the event of a failure to the primary server. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Cramer and Cowan to include a synchronous connection when having a stand-in backup server as taught by Zetts in order to increase data reliability. This would have been obvious because Zetts teaches that the above process is better suited for maintaining data reliability and accuracy in a server environment. (Zetts column 3, lines 4-9)

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer (6,920,579) in view of Wang (6,587,970) in view of Cowan (6,115,743) in further view of Midgely (6,115,743).

As per claim 22:

Cramer, Wang, and Cowan do not explicitly disclose a system for archiving data from said secondary data repository to one of a plurality of archival data stores in response to a second input received from the user via said graphical interface, wherein each of said plurality of archival data stores contains a different point-in-time level snapshot of data stored in said secondary data repository.

In column 1, lines 59-67; Midgely clearly discloses a system that records snapshots in order to back up data. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify Cramer and Zetts to include the snapshot copy system as taught by Midgely in order to increase data availability and recoverability. This would be obvious because Midgely teaches that the above system is better suited for backing up data. (Midgely column 2, lines 11-18)

***Allowable Subject Matter***

Claim 11, 17, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2114

Claims 23-25 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The limitation of doing a server failover from a primary to a secondary server in a single action, wherein said single action is a button click by a user on the GUI. This single action requires the primary server, secondary server, management server, or the GUI perform no additional steps. This is allowable over the prior art, for this limitation in combination with the other limitations of claim 23.

Claims 24 and 25 are allowable through dependency on claim 23.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Assessor whose telephone number is (571) 272-0825. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2114

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BA



**SCOTT BADERMAN**  
**SUPERVISORY PATENT EXAMINER**